In the Claims:

Claims 1 to 17 (Canceled).

1   18.   (Previously presented) A procedure for calculating a tire
2   contact length (6), whereby a sensor transponder (1) is
3   fitted with at least one acceleration sensor arranged on
4   the inner side of a running surface (2) of a tire (9), the
5   signals from the acceleration sensor are compared with
6   threshold values and are then integrated, and the tire
7   contact length (6) is calculated independently of the
8   velocity using quotient formation.

1   19.   (Previously presented) The procedure according to claim 18,
2   characterized in that the tire contact area (tread) is
3   calculated from the tire contact length (6) using
4   tire-specific parameters.

1   20.   (Previously presented) The procedure according to claim 19,
2   characterized in that the wheel load is calculated using
3   the tire contact area and the tire pressure.

Claims 21 to 31 (Canceled).

1   32.   (Currently amended) A method of ~~using the apparatus~~
2   ~~according to claim 29 to calculate~~ <u>calculating</u> at least a

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3   tire contact length of [[the]] a rotating tire of [[the]]

4   a vehicle, comprising the steps:

5   a)   as the tire rotates, measuring [[said]] acceleration

6   data of the tire using [[said]] an acceleration sensor

7   arranged on the tire;

8   b)   using said transponder transmitting [[said]] measured

9   data comprising said acceleration data to [[said]] a

10   receiver arrangement, and providing said measured data

11   from said receiver arrangement to [[said]] a central

12   unit comprising an evaluation unit arranged in the

13   vehicle;

14 c)   in said evaluation unit evaluating said acceleration

15   data to determine therefrom a first result dependent

16   on a duration of said acceleration sensor passing

17   through said tire contact length during one rotation

18   of the tire and a second result indicative of a

19   duration of said one rotation of the tire, wherein

20   said evaluating comprises comparing said acceleration

21   data to a threshold using said comparator and

22   controlling said integrator with an output signal of

23   said comparator, and integrating said acceleration

24   data dependent on said comparing; and

25 d)   forming a quotient of said first result relative to

26   said second result to determine said tire contact

27   length relative to a circumference of the tire and

28   independent of a tire rotation speed of the rotation

29   of the tire.

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33. (Previously presented) The method according to claim 32,
     further comprising a step of calculating a tire contact
     area of the tire from said tire contact length and at least
     one tire-specific parameter of the tire.

34. (Currently amended) The method according to claim 33,
     ~~wherein said sensor transponder unit further comprises a~~
     ~~pressure sensor that is arranged and adapted to measure~~
     <u>further comprising measuring</u> an air pressure in the tire
     and ~~to provide~~ <u>providing</u> corresponding pressure data as
     part of said measured data to said ~~transponder, wherein~~
     ~~said method further comprises a step of~~ <u>central unit, and</u>
     calculating a wheel load of the tire from at least said
     tire contact area and said pressure data.

[RESPONSE CONTINUES ON NEXT PAGE]

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